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ABSTRACT

This manual is designed to assist typewriting teachers in the implementation of the Alberta, Canada, Typewriting 10-20-30 Curriculum (1985). Many ideas contained in the handbook can also be used in curricula that address keyboarding or the skill of typing in computer keyboarding, dictaphone typing, or word processing. The manual is organized in five sections. The first section introduces the typewriting program and provides a list of course objectives and a flowchart of the course modules. In the second section, instructional and lesson planning are covered. The third section features skill development and includes instructional suggestions for these areas: building skills, causes of typing errors, elements of good typewriting techniques, building touch-typing skills, building composition skills, building production skills, and hints for teaching typewriting on the computer. Section IV describes the facilities needed for the typewriting course, including the room, equipment, and design of a typewriting laboratory. The final section of the manual covers student evaluation, providing general guidelines and discussing distribution of marks for technique, speed and accuracy, production, and theory. Various charts to be used in the course are included at the end of the manual. (KC)

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Senior High School

TEACHER RESOURCE MANUAL

ED284035

Typewriting 10-20-30

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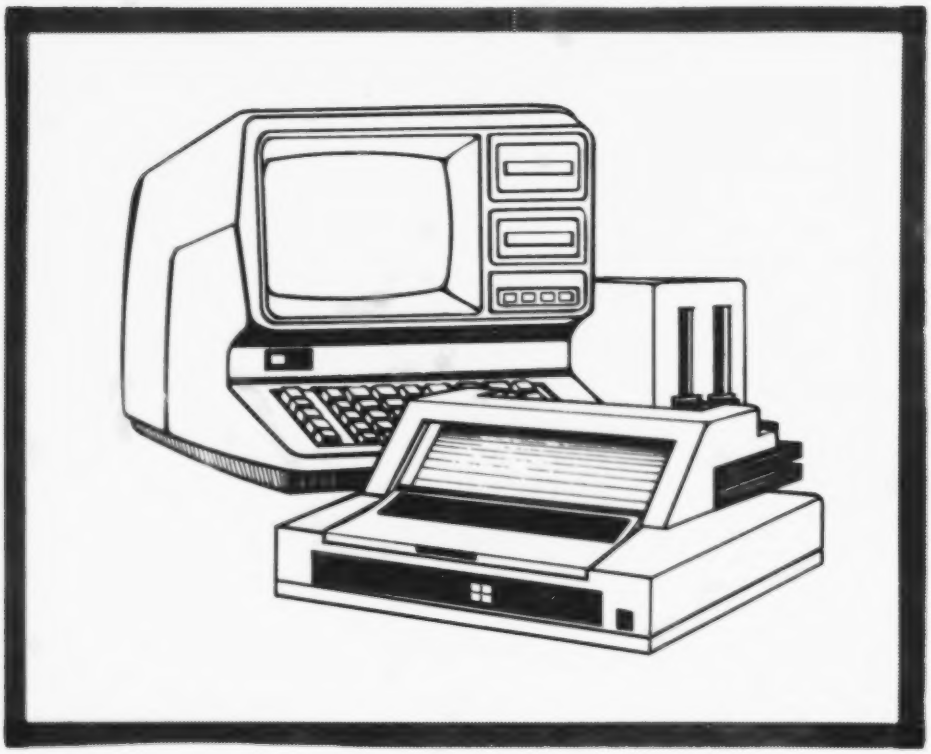
TYPEWRITING 10–20–30

TEACHER'S MANUAL

1987



Alberta
EDUCATION

PREFACE

This manual is designed to assist typewriting teachers in the implementation of the Typewriting 10–20–30 Curriculum (1985). Many ideas contained in this support document can also be used in curricula which address keyboarding or the skill of typing in computer keyboarding, dicta typing or word processing. Suggestions made in the manual reflect numerous practices and suggestions of experienced typewriting teachers that have proven to be successful.

The manual does not purport to include an exhaustive list of instructional approaches or to advance one particular instructional technique or philosophy over another. However, it does attempt to address areas which may be of particular concern to typewriting teachers, and it may ultimately lead to a greater consistency across the province in the instruction and evaluation of typewriting.

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Dr. Steve Kashuba	Education Consultant Business Education Zones 1, 2, and 3
Dorothy Haines	Education Consultant Business Education Zones 4, 5 and 6
Sharon Prather	Program Manager Curriculum Branch

The information included herein does not constitute government policy, nor does it mandate decisions for school systems. Local program decisions will necessarily reflect the needs of the student, community and the facilities available in the school.

The authors wish to extend their appreciation to the Associate Directors of Curriculum, Garry Popowich and A. A. (Scotty) Day, who authorized development and publication of this manual. In addition, many teachers were involved in assessing the criteria for student evaluation in 1985–86. Betty Berent of Valleyview School (retired) and Diane Normington assisted in the early stages of the manual. The following members of the Curriculum Branch provided invaluable assistance in the production of this document:

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SECTION I: PROGRAM

PROGRAM

Introduction

Typewriting offers an opportunity for the student to develop the keyboarding and production skills that are valuable for personal use or vocational preparation. The introductory modules are structured to facilitate development of correct touch keyboarding techniques. These techniques are the foundation from which students build skills to produce efficiently a variety of transcripts in mailable form. Students expand their production skills by becoming efficient in the use of the equipment and building skill in editing and composition.

Objectives

The student will:

1. assume good posture at the work station while demonstrating an ability to maintain correct finger control on the keyboard

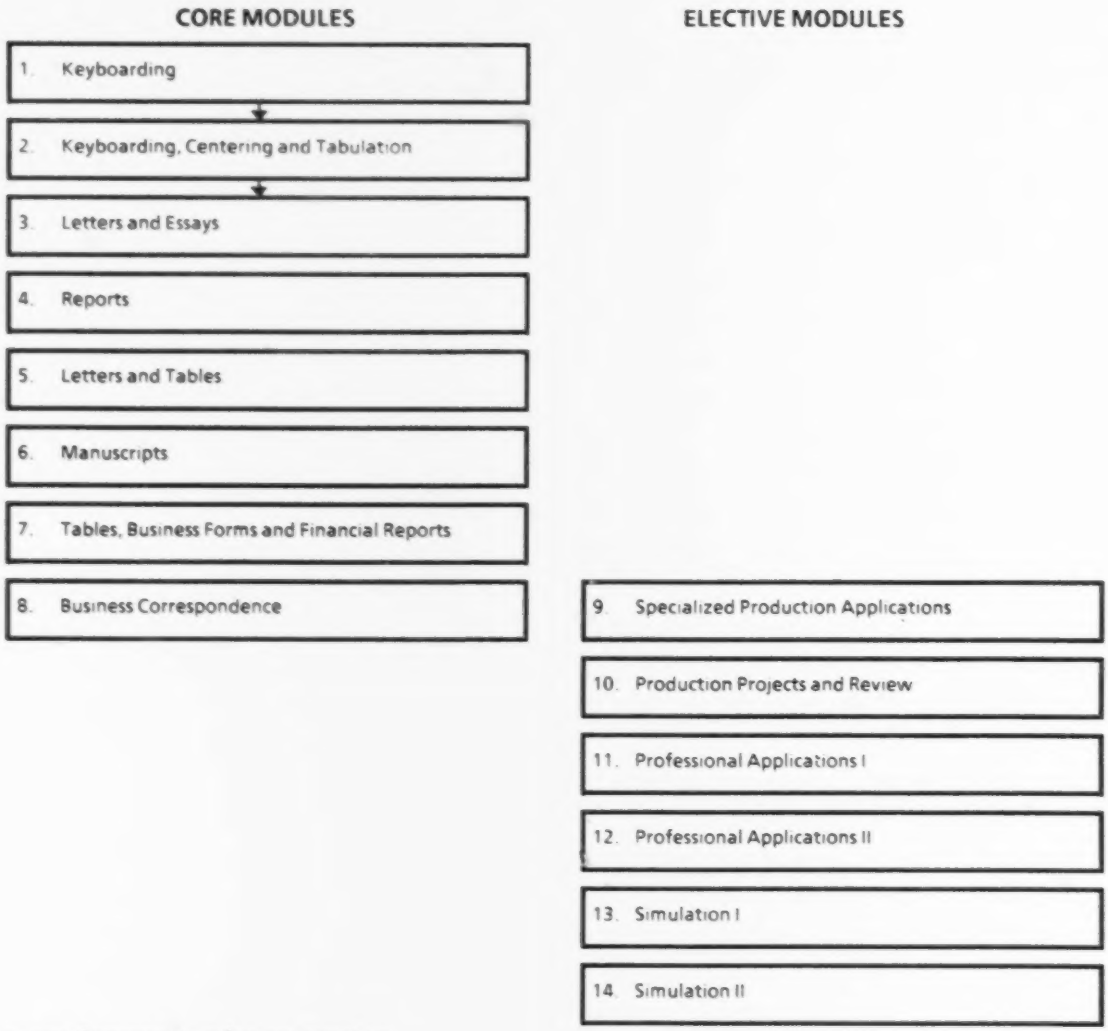
2. select and use the various machine parts in an efficient and appropriate manner

3. compose and edit at the work station, demonstrating knowledge of correct language and production procedures

4. produce a variety of mailable copy from rough draft, unarranged, and unedited source material

5. demonstrate efficient work habits and a commitment to quality production.

Flowchart of Modules



Notes on Course Implementation

The typewriting subject strand consists of 14 modules: 8 core and 6 elective. The core modules are prerequisite to the elective modules. Modules 11, 12, 13 and 14 are recommended for the 30 level.

The first three modules are prerequisite to Modules 4 and 5. Modules 4 and 5 are not sequential, but are prerequisite to Modules 6, 7, and 8. Modules 1 to 8 are prerequisite to Modules 9 to 14.

Although all modules can be offered on machines with text-editing capability, it is recommended that students have access to text-editing equipment for Modules 10 to 14.

Typewriting 30 may only be offered for 5 credits (5 modules). A maximum of 15 credits is available to a student in Typewriting 10-20-30. Modules from the "Optional" column which are recommended for integration are:

12. Dicta Typing 1
13. Dicta Typing 2
14. Word Processing 1
15. Word Processing 2
16. Business Simulation

Refer to individual modules for further information regarding equipment and/or prerequisites.

SECTION II: PLANNING

PLANNING

INSTRUCTIONAL PLANNING

1. **Access Planning Documents Necessary for Effective Planning**

   The following documents should be reviewed when preparing course plans:

   Typewriting 10–20–30 Curriculum Guide (1985)
   Business Education Manual for Administrators, Counsellors, and Teachers (1987)
   Learning Resources Distributing Centre Buyer's Guide
   Teacher Resource Manual(s) to accompany approved textbooks

2. **Determine Modules to be Taught**

   Refer to the Flowchart of Modules, page 4, to determine which modules will be included in the course. Ensure that, where necessary, sequences or prerequisites are addressed. Select one module for each credit designated for the course (for example, Typewriting 20, if offered for three credits, requires three modules that are sequential to those taught in Typewriting 10).

   Some students entering Typewriting 10 may have taken typewriting or keyboarding previously. If students have mastered the objectives outlined in Modules 1, 2 and/or 3, subsequent modules should be included. However, before the advanced modules are designated, it is recommended that a pre–test be administered to ensure that students are indeed competent in all of the objectives for each module to be exempted. For example, students may know the keyboard, but use incorrect stroking techniques.

   Students may be able to touch–type, but do not know how to handle the designated production assignments. Students who will benefit from refining techniques and increasing speed and accuracy through additional drill and practise and/or using alternate resources should NOT be exempted from the introductory modules.

3. **Select Student and Teacher Resources**

   A number of BASIC resources have been identified for typewriting. The most recent approvals are listed in the Learning Resources Distributing Centre Buyer's Guide. These resources offer teachers alternative instructional strategies and variation in activities and assignments. If possible, it is valuable to have more than one class set for student use as well as one copy of each of the approved resources (text and manual) for teacher reference.

4. **Sequence the Module Topics**

   When the modules have been defined, the teacher is encouraged to sequence the topics which are outlined for each module in a manner that suits the:

   - needs of the students
   - available resources
   - preferred instructional style of the teacher

   The curriculum guide also includes a correlation for each of the approved textbooks with respect to the topics outlined within each module.

   In addition, certain topics such as composition and aspects of theory (i.e., word division) may not be included in the textbook. Generally, such information is available in alternative resources.

COURSE PLANNING WORKSHEET
FOR TYPEWRITING 10–20–30

Maximum Credits: 15
Course Sequence: Typewriting 10 (3) (5), Typewriting 20 (3) (5), Typewriting 30 (5)

	MODULE	COURSE LEVEL	PREREQUISITE MODULES	EQUIPMENT SUPPORT (REQUIRED/RECOMMENDED)
CORE	1. Keyboarding	10		Requires access to typewriting lab.
	2. Keyboarding, Centering and Tabulation	10	TY Module 1	
	3. Letters and Essays	10	TY Module 2	
	4. Reports	10/20	TY Module 3	
	5. Letters and Tables	10/20		
	6. Manuscripts	20	TY Modules 1 to 5	Access to text-editing facility and necessary printer support.
	7. Tables, Business Forms and Financial Reports	20		
	8. Business Correspondence	20		
ELECTIVE	9. Specialized Production Applications	20/30	TY Modules 1 to 8	
	10. Production Projects and Review	20/30		
	11. Professional Applications I	30		
	12. Professional Applications II	30		
	13. Simulation I	30		
	14. Simulation II	30		

* A maximum of one optional module may be included in a 3–credit course, or two modules in a 5–credit course.

OPTIONAL	12. Dicta Typing 1	20/30	TY Modules 1 to 5	Requires access to transcription equipment.
	13. Dicta Typing 2	20/30	Dicta Typing 1	Requires access to dictation/transcription equipment.
	14. Word Processing 1	20/30	TY Module 3	Requires text-editing equipment.
	15. Word Processing 2	20/30	WP Module 1	
	16. Business Simulation	20/30		

5. **Establish Standards of Achievement**

Each typewriting course should clearly outline the learning expectations for students. Refer to Section V for suggestions for evaluating student achievement in Typewriting 10–20–30. The *Business Education Manual for Administrators, Counsellors and Teachers* provides general recommendations for evaluating student achievement.

LESSON PLANNING

Typewriting, as a course which focuses on skill development, benefits from carefully sequenced drill and practice as well as the development of student knowledge regarding proper procedures. Careful lesson planning is important to ensure that optimal use is made of available class time. Lessons may focus on technique, production or a combination of both. There are six basic components which are usually included in a typewriting lesson:

1. Warm-up
2. Review of Previous Lesson
3. Focussed Skill Development
4. New Learning or Drill and Practice
5. Class Closure

The following outlines some suggestions to keep in mind when planning a typewriting lesson.

Hints and Ideas for Instruction

1. Develop a routine which brings results and addresses the needs of all students in class.

2. Devote part of every class period to skill building drill, directed by the teacher. Always explain the objective and the reason for it. Be sure to allow for evaluation, even if it is the students' self–assessment indicated by a show of hands. Then provide the opportunity or direction for follow–up work.

3. Three to five minutes warm-up at the beginning of the period is a useful routine. Students can limber up their hands, review previous techniques and settle down ready for instruction. It also allows the teacher time to complete any necessary exercise(s) at the beginning of the period. Post the exercise to be used and don't let this warm–up last longer than five minutes.

4. Vary the length of the drills or the means of measuring (10–15–20–30 seconds; one, two, three minutes; or repeat a word, phrase or line two, three, five times). The length may be determined by the nature and the objective of the drill.

5. Avoid tension when starting a drill by saying in a normal voice, "Everybody ready? Now start typing." To stop the typing say, "Time," to detract from the idea of a race or test when the word "stop" is used.

6. Use the terms "timings" and "timed writings" instead of "speed test". Timed drills are useful to direct technique improvement and typewriting control. Timed writings are useful only as a measurement of achievement. Use them sparingly and for that purpose only.

7. Always set a goal for a drill following a pre-test in order to determine each student's need, then assess or evaluate the achievement, and provide a reward or recognition of progress.

8. Use a variety of devices to assess achievement. Don't concentrate unduly on speed and accuracy -- count accurate words instead of errors, number of accurate lines, appearance of typescript, greater quantity or fewer errors than previous try.

9. Treat the typescript produced during skill building exercises as practice material only and don't collect or grade it. This relieves tension and the fear of making errors. There are other types of exercises and "production" work that can be handed in for grading purposes.

10. Whenever possible, the student should be given a choice of several attempts.

11. Spurt timings for speed growth should be for 12-second intervals (these convert to words per minute because every stroke or motion on the scale is equal to a rate of one word per minute). Timings for accuracy should be thirty seconds or one minute in length.

12. When presenting new material, alternate periods of instruction with opportunities to practise familiar skills.

13. Where applicable, relate new material to that previously mastered (e.g., comparison of letters to memos) and to business applications.

14. Lesson closure should include a brief review of attained objectives.

15. Encourage students to monitor their speed and accuracy (see Appendix B).

The following page can be used to outline when the modules and themes will be taught throughout the course.

COURSE-AT-A-GLANCE

LONG-RANGE PLANNING FOR _____

WEEK OF	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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18					
19					
20					

SECTION III: SKILL DEVELOPMENT

SKILL DEVELOPMENT

The recommended textbooks are an aid in typewriting instruction but cannot replace the teacher. However, the teacher cannot disregard the logical order of presentation, the wealth of material for practice and application of typing techniques and procedures that a text can provide. To use the textbook effectively, the teacher needs:

- an understanding of the psychology of typewriting
- a commitment to specific instructional goals
- as well as student performance objectives, a "bag of tricks" to motivate learning and to guide the development of typewriting techniques.

THE PSYCHOLOGY OF TYPEWRITING

An understanding of the basic principles for building typing skill is needed. Following are some basic ideas.

1. Typewriting is a skill that is controlled more by the mind than by the hands.

2. Typing skill can best be learned when the student is highly motivated.

3. The development of typing skill is often accompanied by excessive fatigue.

4. The development of skill requires the elimination of waste motions and poor techniques.

5. Students should at all times be given the opportunity to progress at their own learning rates.

6. Practise of any single phase of the learning process should be given in a natural rather than an artificial situation.

7. The repetition necessary to acquire any aspect of typing skill should be discontinued as soon as it ceases to be effective.

8. Opportunity should always be provided for relearning in a successive practice period what has been forgotten (or imperfectly learned) since the preceding practice period.

9. Practice of a skill is often ineffective when the learner is discouraged by the results of practice. Opportunities for students to achieve success should always be provided.

10. Practice of a skill does not necessarily lead to perfection.

11. One phase of a skill should not be built at the sacrifice of another.

12. Short learning periods are more effective than long ones when developing skill .

13. The learner should work toward a goal that will be reasonably easy to attain.

14. Plateaus in typing are not necessarily signs that learning is not taking place.

15. The development of a skill proceeds at a slower rate as higher levels of skill are attained.

16. Most learners can increase their skill with correct and directed practice.

INSTRUCTIONAL SUGGESTIONS

The teacher should:

1. guide and direct the student to master the techniques of touch-typewriting; to build and perfect the skill of typewriting; to use the machine as a tool for writing as well as copying material, and to apply knowledge and skill in the production of relevant jobs

2. use a variety of teaching strategies that motivate and direct learning

3. apply sound principles of the psychology of learning

4. treat each student as an individual who needs sympathy, understanding, encouragement, praise, commendation and the experience of success.

Building Skills

Developing typewriting skills is a combination of automatic responses and knowledge of procedures. This combination is applied in a practical sense when the student types straight copy or production material. As in any skill development, carefully sequenced drill is essential to overcome problems, or to move to a higher level of skill application. It should be noted that techniques may vary as a result of the type of equipment used. For example, when using a computer, the student may not be able to use the function keys without looking at the keyboard. The following sections may help teachers identify why students encounter difficulty.

Causes of Typing Errors

The teacher needs to be alert to the common causes of typing errors, and devise drills, exercises and procedures to correct them. Most typing errors are due to the following:

1. Incorrect Techniques in Stroking and Machine Manipulation

   - faulty key stroking
   - fingers not held close to the keys
   - irregular typing rhythm
   - excessive arm and wrist motion
   - improper use of the shift key
   - faulty return
   - failure to operate machine parts by touch

2. Incorrect Procedures in Reading the Copy

   - reading ahead of the word being typed
   - failure to keep eyes focussed on the copy
   - looking up at the end of each line

- looking to see what has been typed or if an error has been made
- poor spelling which interferes with typing the copy correctly

3. Errors in Typing Skills

   - incorrect syllabication
   - incorrect application of typing usage rules
     - use of capitalization
     - use of hyphenation
   - wrong format in typing various types of production

Elements of Good Typewriting Techniques

Some suggestions

1. To Improve Key Stroking

   - quick, sharp tap in the middle of the key
   - curved fingers
   - fingers of both hands hover above the home row keys
   - fingers reach up or down from the home row
   - fourth finger stretches to the shift key
   - when shifting, keep an anchor on the home row
   - right thumb strokes the space bar
   - right thumb remains close to, but not on space bar

2. To Improve Position and Use of Body

   Remember:

   - eyes on copy (after establishing location security)
   - type with fingers; don't lift hands
   - quiet hands and arms; don't bounce
   - level wrists; no sag, no hump
   - avoid resting palms on machine or table
   - wrists close together; thumbs could lock

- elbows close to body; not winged
- sit one hand span from machine
- feet balanced on floor
- sit erect, hips well back in chair, body leaning forward slightly
- head erect
- sit correctly, do not slouch

3. To Operate Machine Effectively

- return carriage without spacing after the last word
- avoid looking at typescript or machine when returning
- use tab key to type two or more columns
- space once after a period in an abbreviation
- space quickly and eliminate pauses between words
- include the space with the rhythm of the last letter of the word
- don't look when using the tab
- don't look when shifting

4. To Increase Control

- think or say letters and spaces
- keep the eyes on the copy at the word being typed, don't look ahead
- deliberately slow your typing tempo
- deliberately speed up your typing tempo
- strive for smooth, continuous stroking
- type in flowing patterns (e.g., the, ing, ell, our, ere, tre)

Building Touch-Typing Skills

It has been amply demonstrated that typists can automatize their actions; and indeed, it is this fact that has made the typewriter, word processor or computer an indispensable business tool. The basic technique of touch-typing must be achieved or the goal of typewriting instruction has not been met. The most frustrating technique that teachers battle is finger watching. What can be done about it? Prevention is the best cure. Deliberate effort should be directed toward preventing the problem and/or seeking ways to overcome it.

Initial Instruction

Automatic stroking without looking should not be expected too soon. The first technique the student must master is stroking. The student must see as each key is located and a quick "snap" stroke is practised. Second, the student must see the home row location for each finger and see the reaches that each finger makes. When the student is secure with the location of a key, the automatic "touch-typing" skill can be developed.

During the first lessons when the keyboard is being presented no particular emphasis should be placed on touch-typing, but every encouragement should be given to students to allow them to stroke without looking as soon as they have confidence and locational security. Always allow students to look for location when the key is first introduced. When introducing a new reach, have them look at the keyboard to identify the reach, watch the finger make it, type the home row key and the new letter, looking if they wish, as the teacher calls the letters, THEN, require that they repeat the drill watching the text copy, the chalkboard, or the wall keyboard chart.

Several factors can contribute to faulty stroking techniques and to finger watching. Too great an emphasis on accuracy, particularly in the early stages of learning is one. Negative criticism instead of praise and recognition of success is another. The practice of allowing students to proceed on their own, following the text directions and merely repeating each line a number of times, often with the provision of not more than X number of errors, may defeat the purpose of the drills.

Suggested Solutions

1. At all times avoid creating stress and tension in typing. Be positive, use praise, and compliment achievement. Success breeds success.

2. The teacher, not the textbook, must direct the learning activities. Use the text as an aid, but interpret the directions, set the immediate objectives, direct the activity, and provide immediate evaluation or reinforcement.

3. Most of the typing produced in the early stages is the product of practice and should not be collected or scored. If work is handed in, don't check too specifically for the number of errors. However, after due practice, some exercises can be assigned as "production" jobs and graded allowing generous error tolerance with greater emphasis on factors such as appearance, spacing and quantity (not speed).

4. The major objectives stressed in the early lessons when the keyboard is being mastered are correct body posture, use and control of body, reaches from home row, and anchoring on home row when reaching for letter or service keys (shift and tab). Speed and accuracy are not major objectives in the early stages.

5. Use special drills and frequent review of keyboard.

6. Avoid stressing accuracy too soon. Too much pressure adds to the feelings of insecurity.

7. Don't rush the keyboard presentation too much. Don't try to teach it in three or four days.

Suggested Strategies

1. Make use of overhead projector, controlled reader, and skill builder.

2. Actually question key watchers as to why they are doing so.

3. Use a technique sheet and check students often, especially in the beginning stages.

4. Encourage extra practice out of class with supervision, if possible.

5. Cover student's hands over the keyboard with your own, as a reminder to avoid key watching.

6. Student watches teacher and types the alphabet the number of times indicated by teacher's upheld fingers.

7. Type sentences backwards letter by letter, or word by word.

8. Type from copy written in another language.

9. Make constant reminders about "eyes on copy" and spot offenders very early.

10. Typing relay. First student in the row types one sentence and passes sheet to next student, and so on. However, the sentence must be repeated if a student watches his or her fingers.

11. Work individually with student and watch as line is repeated over and over.

12. Use a positive approach and praise those who do not watch instead of always warning the "lookers".

Building Composition Skills

The technique of composing at the typewriter is included in the curriculum in each module. A number of strategies and activities can be used to motivate students to develop this ability. Work from the simple to the complex, starting with word responses and moving to phrases, sentences, paragraphs, letters, reports, and essays. The whole process encompasses the students' ability to think while typing, to be creative, to spell, to punctuate and to apply all the principles of language usage while at the same time observing correct typing techniques of format, correction of errors, proofreading and typing with control. Meaningful application at regular intervals is essential. At every level of typewriting instruction, provide composational practice at least once each week.

Students respond to a game, contest or any form of competition with others and/or with themselves, as members of a group or individually. Such devices are vehicles for assisting in the achievement of the objectives. Use them wisely. Explain the objective, the procedure and rules, conduct the activity, and give reinforcement through immediate assessment and recognition.

At first, devise games to elicit one word responses. Many party games and contests can be adapted. For example, "I Spy", which names all objects in a room that begin with the same letter; typing the names of places (cities, towns, countries) that start with the last letter of the preceding word. Start with your home town; e.g., Warburg, Grande Prairie, Edson. It may help if you list a few names that start with, but do not end with "A". Allow three or five minutes, then count to see which group and/or individual listed the most. Within a specified time limit, see who can type the longest list of favourite T.V. programs, names of cars, athletic teams, and school subjects.

Pictures are excellent thought starters. These can be posters, cartoons, comic strips, magazine cutouts, photographs, projected 35mm slides, filmstrips, or transparencies. The topic should be related to the season of the year or students' interest in school events, community activities, or sports. Show the picture for 30 seconds, then ask for typewritten responses to directives or questions such as: List all the items you saw. List the colours you saw. Where was a particular object? What was the girl wearing? What was the man doing? What items might you find in a lady's handbag? In a boy's pocket? In a desk drawer?

Later, develop the typewriting of sentences and paragraphs. Give one word, then two or three to use in a sentence. Make up a sentence and ask students to compose one to follow. Give them a starter for the sentence; for example, tell the use one makes of each object in a list, or ask in which room(s) each object would be found. Ideas can be developed by telling a story, a joke, or an anecdote (the Reader's Digest is a good source) then asking students to type it in their own words. Tell part of a story (one with lots of intrigue, adventure, mystery) and ask students to finish it. Allow some students to read their stories to the class, and post others on the bulletin board. Read interesting items from newspapers and magazines and request comments or answers to a series of questions, some factual and some involving decisions and judgments. Students enjoy writing letters to "Dear Abby" or "Ann Landers" and exchanging these to compose one another's replies.

Encourage students to use composition at the machine for personal jobs. Survey the class to find out what kind of typewriting they have occasion to do. Answer the questions at the end of the chapters; compose notes, reports and personal letters. There is a place for evaluating factual knowledge about typewriting through typewritten answers to questions. A common activity for everyone to do is to complete a questionnaire, application, or other type of information-gathering process.

Building Production Skills

The following list describes qualities of a good production typist:

1. touch–typist who produces error–free copy
2. understands basic format rules for reports/manuscripts, forms, correspondence, tables, statistical typewriting
3. modifies format rules to suit unique requirements of specific production assignments
4. proofreads effectively
5. handles equipment and resources efficiently
6. recognizes and responds to edits
7. works independently or co–operatively
8. knows where and how to use various references
9. proceeds with minimal instruction.

Hints for Teaching Typewriting on the Computer

The methodology of teaching keyboarding is the same whether it is taught on a manual, electric or microcomputer keyboard. As is the case with the typewriter, drill and practice exercises on the microcomputer are a must if proficiency in keyboarding is desired.

Timings done on a microcomputer can be marked and calculated more readily than on conventional equipment. This is achieved by professionally, or teacher-produced programs developed for this purpose. Classroom production work on the microcomputer does pose problems, however. The opportunity to print from another's disk, to transfer information and to access other students' work is an ever-present factor. The following are practices developed by teachers which minimize the opportunity for students to copy the work of others:

- Strict monitoring on the teacher's part. Make it known at the beginning of the course that you are aware of the problem in general (do not present ideas) and that you will be on a constant "lookout". Be sure to indicate penalties.

- Penalize equally the "lender" and the "borrower" of a piece of work. For example, if two jobs are identical, divide the mark obtained on one of the jobs by 2 and each student receives that mark. This serves to discourage the "lending" of material.

- Assign a specified 5 to 15 minute period during the class time for printing only and use this same period as one of strict observation.

- Watch for identical errors. Errors appearing on one student's work that are duplicated in another's are sufficient indication for you to check the disks of both students for the presence of the job or for the transfer of the job.

- Maintain control of the class set of disks. Distribute school disks to the students at the beginning of the year. These disks are stored in the classroom (locked storage) at the end of each class and cannot be accessed unless the teacher is present. This system facilitates spot checks of disks and discourages copying.

- Erase all student work disks at the end of each semester (year). This prevents the building of a course file on assignments, tests, etc.

- Personalize each assignment as much as possible. This can be achieved by requesting such features as: a remark statement, signatures, sentence(s) or paragraph(s), composition, and word substitution (ask for thesaurus use).

- At a randomly chosen time, ask for job retrievals for the entire class. Then do a "walkaround" check. Give subjective feedback and note who has completed assignments or parts thereof.

- Use professionally – or teacher-developed packages for drills and timings. The teacher is able to direct how many timings are done, and when they are done. Speed calculation and error detection are done by the microcomputer and are recorded on each student's disk.

- Ask for the inclusion of name and date before program can be accessed. This is simply another method of discouraging the use of someone else's work, or the copying of an assignment during a student's absence.

As teachers gain more experience in teaching the typewriting curriculum using the microcomputer, techniques for the monitoring and evaluation of student work will become more refined. Through teacher awareness, communication with others, and a sharing of ideas, teachers can work toward the implementation of an effective program.

SECTION IV: FACILITIES

FACILITIES

THE TYPEWRITING ROOM

A typewriting laboratory should embody several considerations which will help to ensure delivery of an effective instructional program. Since a variety of typewriting equipment ranging from regular typewriters to sophisticated word processors is available, perhaps ergonomic considerations in the lab are the most important. These considerations include space allocation, lighting, use of colour, flooring material, and power supply. The following suggestions are not meant to be prescriptive but, rather, as a guide to facility planning.

Size

Allocate about 43 ft.^{2} (13m^2) for each student. For 25 students, the lab area should be at least 1000 ft.^{2} (305m^2). Add to this the area required for storage, shelving, and work space. A desirable size for one lab should be about 1200 ft.^{2} (366m^2).

Flooring Material

To minimize the noise levels in a typewriting lab, it is desirable to install a broadloom floor covering. This will also help to decrease dust levels and facilitate custodial services. Microcomputers today are constructed in such a way as to eliminate problems with static electricity, and schools no longer have to install linoleum floors.

Lighting

Lighting is always a very important consideration. If regular typewriters are used in the lab, lighting should be maximized and exceed 70 candle light power. If, on the other hand, microcomputer CRT's or LCD's are used, lighting should be muted, non–reflective, less than 70 foot candles, and, if possible, spectrum lighting. The amount of light emanating from natural sources such as a skylight or windows should also be strictly controlled to suit the machine format.

Desks

Student desks, whether locally constructed or produced in a specialty factory, should provide an appropriate keyboard height of 27" to 29" (685.8mm to 736.6mm) depending on whether student is in junior or senior high school; have sufficient space for a typewriter, microcomputer and any required peripheral; have adequate space for student note taking, and should be sturdy.

Chairs

Chairs should be adjustable in height, sturdy, provide lumbar support, and include arm rests. Such a chair will do much to minimize fatigue.

Power Supply

Power outlets should be centrally controlled. Many schools access power through "ceiling dropped" power poles. These tend to be less prone to maintenance problems and more flexible than floor installed plugs.

Other Equipment

- Stop watch, bell, and/or buzzer
- Interval timer
- Overhead projector and screen
- Grease board if computers are used
- Bulletin boards
- Storage space
- Shelving
- Appropriately located waste baskets
- Copy holders (if desired)

EQUIPMENT

Selection of Equipment

The advent of the microcomputer has expanded the options for equipping the typewriting lab. The basic skills of keyboarding have traditionally been taught on manual or electric typewriters. Now, with the advanced electronic capability, a wide range of automatic functions are available on:

- electronic typewriters
  - basic keyboarding functions only
  - automatic functions (centering, decimal tabs, etc.)
  - memory capability
- microcomputers
  - with word processing software
  - with integrated software (word processing, data base, spread sheet)
- dedicated word processors

Consider application when selecting the equipment:

- What do students need to learn
  - to touch–type?
  - to prepare for a job in an office?
  - to be able to use the typewriter/computer for personal use?
- How will the lab be utilized
  - introductory classes?
  - senior classes?
  - mixed level classes?
- If vocational objectives are involved, what is the work environment students will enter?

Inventory and Maintenance

Refer to the *Business Education Manual for Administrators, Counsellors and Teachers* for suggestions regarding inventory and maintenance of equipment.

DESIGN OF A TYPEWRITING LAB

The following information has been modified from an interim report by the School Buildings Branch of Alberta Education, *Planning and Designing School Computer Facilities*.

1. Laboratory Configurations

An effective typewriting lab will provide adequate work space, proper lighting, clear view of teacher/student for instruction and supervision.

It is suggested that an area in the range of 4.3–4.7m^2 (46–50 sq. ft.) per work station be allocated with an additional 20–30m^2 (215–325 sq. ft.) of space provided adjacent to the main laboratory for secure storage, noisy peripherals and maintenance use.

2. Architectural Design

a. Access

Security considerations suggest that access to the laboratory should be controlled. This is best achieved by locating the laboratory away from exterior building walls. Modifications will have to be made where the laboratory will be used outside of normal operating hours; for example, to serve adult education programs. Adequate wheelchair access should be provided.

b. Acoustics

Careful attention must be given to room acoustics because normal classroom noise levels may be supplemented by noise arising from computer printers, disk drives, and audible cursor controls. Acoustic control should be addressed through ceiling, wall and floor finishes and acoustic insulation of air ducts.

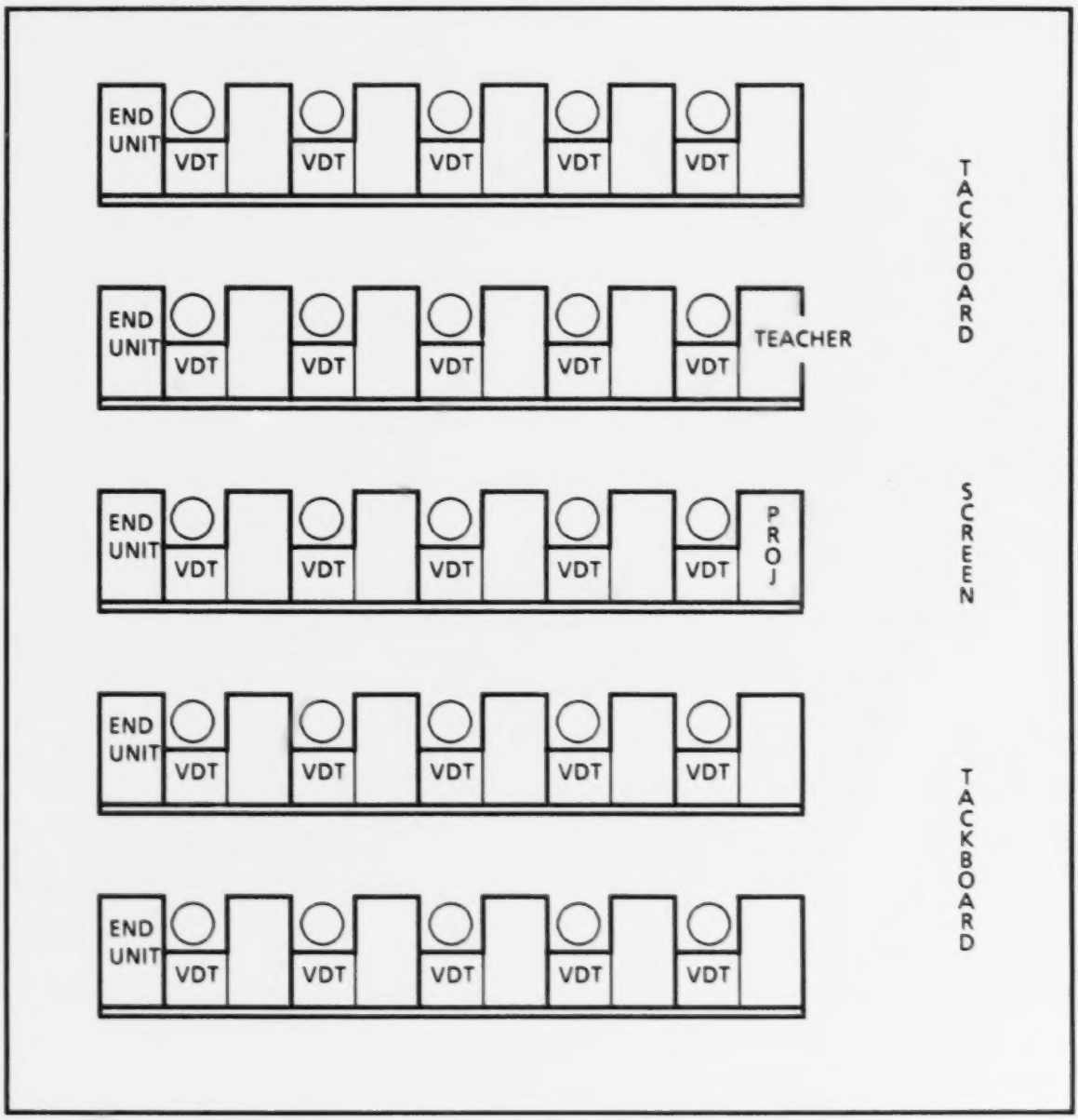
c. Dust Control

In order to reduce maintenance problems with computer disk drives, materials and room accessories should be selected which are readily cleaned and which do not contribute dust to the room environment. In particular, chalkboards should be replaced with overhead projection screens or whiteboards, although the latter are not entirely dust free. Windows should be sealed.

d. Natural Light

The use of natural light must be carefully planned to avoid both direct screen reflections and ceiling glare. An overall light level in the range of 400–700 lux (37–65 foot candles) is recommended. Natural light levels are in the range of 1 000 lux (storm cloud cover) to 100 000 lux (9290 foot candles, unobscured sun). Natural light, if any, must be attenuated and provided in a direction perpendicular to VDT screen orientation.

COMPUTER LABORATORY WITH INTEGRATED PRACTICE AND TEACHING AREAS



e. Security

Security provisions should include fire resistant walls which extend from true floors to true ceilings. Skylights and windows should be barred. Automatic fire doors should be considered to control smoke damage to computers as well as for fire-spread control. Storage for computer tapes and disks should be fire-, water-, and smoke-proof. Remote or off-site storage of data backups should be provided.

f. Static Electricity Control

Floor materials should be selected which resist static electricity build-up. Consideration should be given to providing a vapour seal envelope for the laboratory by using vapour barriers and sealant paints for the lab. Humidity control assists in reducing static build-up. Triple glazing should be considered to reduce window fogging resulting from inside humidity conditions in cold weather.

g. Storage

Storage (some movable) should be provided for supplies and student and teacher reference material.

3. Electrical Design

a. Cabling

Electrical raceways can be incorporated into student work stations. Raceways should be large enough to provide for cables for regular power, clean power, telephone data lines, local area network communication lines. As an alternative, cable hangers can be provided inside work stations, with wires being bundled using nylon ties. Raceways should connect to room systems by raceways located in floors, walls or ceilings. If free–standing poles are used to communicate to ceiling raceways, they should be placed against walls or otherwise secured to withstand severe classroom usage which greatly exceeds that normally found in office environments. All raceways should be readily accessible to permit cable changes, extensions and repairs, but should not obstruct vision.

b. Communications

Some labs may be equipped to handle telecommunications, either in the form of a local area network or external telecommunication. Provision should be made for regular phone service through the school switchboard and for separate dial-up lines to computers with modems. The latter should by-pass school switchboards and have no extensions that could cause data line disconnection.

c. Fire and Smoke Protection

Fire and smoke alarm systems should automatically close computer room doors and cut off all air supply to the computer room. The latter is particularly important because a fire in a remote part of the building can still cause severe damage to computers from circulated smoke. Only halogen-type fire extinguishers should be provided in computer labs. Use of sprinkler systems should be avoided. Plastic covers have proven useful in reducing damage from fire, smoke, water and ambient dust. Fire resistant construction should be utilized when feasible.

d. Lighting

Artificial lighting for the computer laboratory should be in the range of 400–700 lux (37–65 foot candles). Light distribution should be as uniform as possible throughout the room. Indirect lighting should be considered. If fluorescent lighting is used, full spectrum lamps should be considered as a contribution to reduction of eyestrain. Egg crate and prismatic diffusers on fluorescents are inadequate; parabolic diffusers which greatly reduce ceiling glare should be used.

e. Power Supply

In order to reduce computer maintenance cost as well as to protect against data loss and downtime, computers should be provided with clean power. Appropriate equipment should be installed to control spikes, surges, noise (electromagnetic and radio-frequency) for the room or on the computer. The power supply should be controlled directly from a main power panel. Individual work station switching is also recommended. The installation of equipment with strong magnetic fields in adjacent rooms should be avoided.

SECTION V: STUDENT EVALUATION

STUDENT EVALUATION

GENERAL GUIDELINES

The suggested student evaluation procedures that follow were developed for Typewriting 10, 20 and 30, after considerable input from typewriting teachers across the province. They are designed to be used by teachers and school administrators. The need for a set of standard guidelines became necessary when inconsistencies in grading student performance became an ever-increasing problem. In particular, the evaluation of basic techniques, and production copy performance has recently become a challenge to classroom teachers that could best be addressed from a provincial perspective.

Typewriting is skills-oriented. As a result, it is expected that a student will learn and perfect, to predetermined levels, the skills of touch-typing (keyboarding or data entry if a computer keyboard is used), data set-up, proofreading, and transcribing information from draft (arranged and unarranged) in an efficient and effective manner.

The development of keyboarding skills in typewriting is paramount. Without emphasis on speed and accuracy and on the accomplishment of a certain level of proficiency, the value of typewriting for the transcription of data would be greatly diminished. Each module in typewriting contains a heavy commitment to the development and evaluation of keyboarding skills. The progress that a student makes in this regard can be measured through the administration of timed writings from practiced and unpracticed material, from arranged and unarranged material, and from easy to complex material.

Timed writings for the purpose of evaluating skill development should be administered to students when a new unit/topic is being launched. Based upon the results, an effective instructional unit can be designed. During the unit, various interim (formative) assessments can be made to determine student progress and learning blocks. When complete, a post-test can be administered. This total program constitutes an evaluation program that is both formative and summative.

Recording student performance on skill tests is the responsibility of both the student and the teacher. That is, most publishing houses produce and market a student workbook which often contains a chart for recording keyboarding speeds and charting progress. These charts can be used effectively for purposes of self-improvement and for providing needed information to the classroom teacher. (Appendix B is an example.)

It is expected that students will be evaluated for each reporting period for progress in four distinct areas: basic techniques, skill development, production application, and general knowledge of typewriting. Insofar as skill development is concerned, it is recommended that three or more of the students' best scores be recorded for one-, three-, and five-minute timings for practised and unpractised material using an appropriate S.I. level and a mix of alphabetic, numeric, and service keystrokes. Refer to Chart No. 1 for recommended S.I. level designations to be used to evaluate student progress in each module.

Ultimately, the purpose of evaluating students is to measure the quantity and the quality of the work, encourage improvement, build confidence, and provide a system of evaluation that is closely aligned with the final use of the skill being measured.

The evaluation guidelines proposed in this document are not mandatory. However, they will help you to address student evaluation in typewriting when:

1. trying to attain evaluation results that can be consistently interpreted across the province
2. attempting to evaluate student performance consistent with expectations in the business community
3. using various automated features on a typewriter, word processor, or microcomputer
4. moving from the use of one type of machine to another
5. using various machines (i.e., electric, electronic, microcomputer, or word processing).

Appendix A recommends the distribution of marks for Optional Modules:

Module 12 Dicta Typing 1
Module 13 Dicta Typing 2
Module 14 Word Processing 1
Module 15 Word Processing 2
Module 16 Business Simulation

DISTRIBUTION OF MARKS

Chart No. 1 provides a recommended distribution of marks for Typewriting 10–20–30. As outlined in the curriculum, the student's mark should be based on the following objectives:

- technique
- speed and accuracy
- production
- theory

As the student progresses through the typewriting program these objectives should receive a varying level of emphasis reflecting the growing accent on producing a mailable copy. Refer to Chart No. 6 which shows schematically the tracking of these four objectives through the modules.

Technique

In the assessment of this objective, three topics (posture, machine manipulation and touch–typing) should be addressed. Each of these three areas is considered to be the composite of a number of skills/behaviours. However, although a teacher may refer to the specific skill or behaviour when coaching or advising the student, it is more realistic and efficient to use four basic components of technique for the purposes of summative evaluation. Even though the teacher will make the final assessment, it is effective to have students assess their own techniques on an ongoing basis.

When referring to Chart No. 1 you will note the decreasing marks allocated to technique in the advanced modules.

	Technique Marks	Posture	Machine Manipulation	Typing
Modules 1 and 2	40	5	10	25
Module 3	35	5	10	20
Modules 4 and 5	30	5	5	20
Modules 6, 7 and 8	25	5	5	15
Modules 9 and 10	20	–	10	10
Modules 11-14	10	–	5	5

Touch-Typing

Refer to Chart No. 2 for a quick, objective method of assessing touch-typewriting. Experience shows that students will accept this plan if it is carefully explained when the course commences. Have students type the alphabet and it will be easy to determine if they are at Level 1, 2, 3, 4, 5, or 6 of the criteria outlined in Chart No. 2.

Posture is allotted 5 percent of the recommended distribution in Modules 1–8. This allocation should focus on the following criteria for good posture:

Head	–	erect, facing copy
Back	–	straight, body leaning slightly forward
Hands	–	held slightly above machine, at same angle as keyboard
Body	–	a hand span from the front edge of the machine, aligned with the centre of the keyboard
Feet	–	flat on the floor, slightly apart

Assessment of the POSTURE mark can take place during timings or production.

Machine Manipulation will need to be defined by the teacher and could include the following:

efficient use of function (service) keys
proper/efficient use of tab keys
proper use of shift keys
proper use of edit keys
proper/efficient setting of margins
proper use of return keys

Speed and Accuracy

The marks allocated to speed and accuracy remain fairly constant throughout the modules, but the expectation for speed increases. Chart No. 3 is appropriate for Modules 1 to 5.

	Chart	Grading Period
Modules 1 and 2	3	1
Module 3	3	2
Module 4	3	3
Module 5	3	4
Modules 6 and 7	4	1
Module 8	4	2
Module 9	4	3
Module 10	4	4
Modules 11–14	5	1–4*

* depending on sequence of modules

The results of Timings may be applied to Charts No. 3, 4, or 5 depending on the module of instruction. These charts may be used for gross (within 5 errors or less) or net (corrected errors) words-a-minute. If the chart is to be used for net words-a-minute, the "0" scale should be applied.

Note that the Syllabic Intensity (S.I.) level and the Length of Timing increase in conjunction with advancement through the modules.

The allocation for Warm-ups should be based on periodic checks of student production in the time allotted for warm-up at the beginning of each typewriting class. Less emphasis should be placed on quality as compared to quantity.

The mark distribution of 5 percent in the first ten modules reflects that a value is placed on the warm-up segment of each class and that students learn to accept it as a component of each typewriting lesson.

Production

The marks allocated for production increase as students gain skill in technique (touch-typing and machine manipulation), speed and accuracy. In addition, students should increasingly be capable of producing "mailable" work under timed conditions. Production which is used for summative evaluation in the introductory modules should not be timed. In advanced modules the timed and untimed allocations are equal.

	Percentage Allocation	
	Timed	Untimed
Modules 1 and 2	0	15
Module 3	0	20
Modules 4 and 5	5	25
Modules 6–8	15	20
Modules 9 and 10	20	20
Modules 11–14	30	30

The following briefly describes a variety of methods which can be used to evaluate student performance of production. There is considerable advantage in varying the method of evaluation to reflect the type of production assignment.

1. 10 Point System

A "job" consists of 10 points for a one-page assignment such as a letter, memo, essay or manuscript.

Deduct 2 points for a major error as defined in text (i.e., proofreading, spelling, placement) and 1 point for a minor error (i.e., punctuation). An alternative to this which is particularly suitable for introductory classes is to separate the 10 points into 5 for accuracy/proofing, and 5 for format. Deduct 1 or 2 marks for each problem within the section.

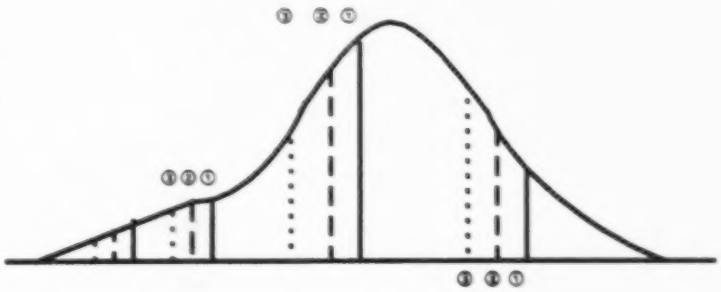
Normal Curve

Convert marks directly to percentage or accumulate grades and then convert or normalize marks. When using a modified normal curve, use a distribution curve thus:

A	80% to 100%	10%
B	65% to 79%	45%
C	50% to 64%	25%
D	40% to 49%	10%
F	39% less	10%

However, because some weaker students leave a sequenced program after Grade 10, the distribution may look like this over a three-year period or for Typewriting 10–20–30:

MODIFIED NORMAL CURVE SHOWING DISTRIBUTION OF GRADES



		F	D	C	B	A
1	TYPEWRITING 10	10%	10%	25%	45%	10%
2	TYPEWRITING 20	5%	8%	25%	42%	20%
3	TYPEWRITING 30	3%	6%	25%	41%	25%

CODE:
——— DISTRIBUTION OF GRADES – TYPEWRITING 10
— — — — DISTRIBUTION OF GRADES – TYPEWRITING 20
• • • • • • • • DISTRIBUTION OF GRADES – TYPEWRITING 30

2. **Production Word Count**

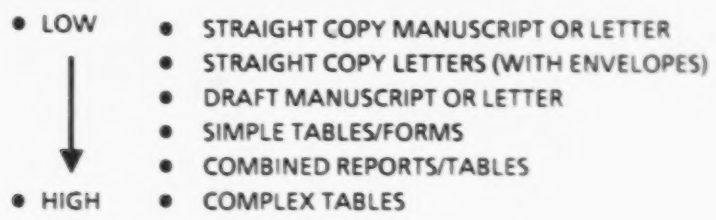
Some textbooks include a Production Word Count or PWC on many assignments. Should this be the case, a teacher is then able to use a standard conversion chart. That is, a student's raw mark on a production test is converted to a score comparable to one on a straight copy timing. The following chart can be used, in general terms, to correlate the student's straight copy speed to the production speed.

Straight Copy Speed	100%	30 wpm	40 wpm	50 wpm	60 wpm	70 wpm
Tabulation	20–35%					
Manuscripts	50–70%					
Letters	60–80%					
Rough Draft (Straight Copy)	70–90%					

Charts No. 3, 4, or 5 can then be used to determine a student's percentage grade.

Some teachers prefer to use the standard timings chart in cases where a production word count can be readily converted. However, there is some difficulty involved in comparing production speeds with standard timing speeds. For example, block centering, centered lines, tables within context, numeric and special stroke keys can drastically affect speed. If these factors were not considered, the marks would obviously be skewed downward. Chart No. 7 provides a graduated scale which can be applied to production assignments of varying difficulty. For example, the teacher would determine which level to use based on:

- difficulty of material



- level of student expertise

3. Mailable Copy

At senior levels in typewriting or at any level when using a word processor or microcomputer, students should aim at mailable copy. In that case a student could be graded on a simplified scale thus:

100%	MAILABLE
50%	MINOR CORRECTION REQUIRED OR MINOR FORMAT ERROR
0%	NOT MAILABLE

If this scale were to be used, each page of a project can be corrected in this fashion. The project grade would then be based on averaging or by totaling individual pages. An alternative grade system is to designate each item/page as:

3	MAILABLE
2	MINOR CORRECTION REQUIRED/MADE
1	MINOR FORMAT ERROR
0	UNMAILABLE

4. Line Count

Various techniques or approaches can be used for Production Line Count (PLC). Further, this can be done for a period of time (i.e., three, five, ten minutes) or for task completion within a certain time limit.

_____ LINES WITHOUT ERROR

_____ LINES WITH ERROR(S)

_____ TOTAL LINES COMPLETED

Grades would then be based on comparing student performance within one class, within one school, or within one school system, depending on the difficulty of the assignment. Chart No. 7 can be adapted for this type of assessment.

Theory

Within each module the curriculum designates specific theory topics. Assessment of students' knowledge of these theory components can be accomplished through traditional assessment strategies (quizzes, tests, reports, etc.). Often, students can appear to understand a concept when in fact they are depending on their neighbour for assistance. As it is particularly important that students are knowledgeable about basic theory as early as possible, more theory marks are allocated in the early modules (20%). In the advanced modules, students are assumed to be able to apply the theory concepts and, consequently, the mark allocation is less (5%).

	Mark Allocation
Modules 1 and 2	20%
Module 3	15%
Modules 4 – 10	10%
Modules 11 – 14	5%

Each module includes a theory component which contains concepts related to format and style as well as production. All modules include editing and composition concepts which become progressively more sophisticated. Students should know the rules of format and style and be able to apply these rules within production assignments. Teachers may wish to test the format and style concepts through short answer tests.

The following chart outlines the theory concepts which are addressed in each theme.

	Theory Focus
Module 1	Editing
Module 2	Enumerations Centering
Module 3	Personal and Personal Business Letters Essays
Module 4	Reports
Module 5	Business Letters Tabulations
Module 6	Manuscripts • Title Pages • Footnotes • Bibliographies
Module 7	Business Forms Tables Financial Reports
Module 8	Business Letter Styles Special Letter Features Envelopes and Labels Memoranda
Module 9	Special Purpose Applications • Technical • Medical • Legal Theory Application
Module 10	Decision Making and Production Review
Modules 11 and 12	Decision Making and Production
Modules 13 and 14	Office Organization

CHARTS

CHART NO. 1

TYPEWRITING 10–20–30

RECOMMENDED DISTRIBUTION OF MARKS

Objective	Modules 1 & 2		Module 3		Modules 4 & 5		Modules 6, 7 & 8		Modules 9 & 10		Modules 11 – 14	
	marks	distribution of marks	marks	distribution of marks	marks	distribution of marks	marks	distribution of marks	marks	distribution of marks	marks	distribution of marks
Technique (refer to Chart No. 2)	40		35		30		25		20		10	
• Posture		5		5		5		5		nil		nil
• Machine Manipulation		10		10		5		5		10		5
• Touch-Typing		25		20		20		15		10		5
Speed and Accuracy	25		30		30		30		30		25	
• Warm-ups		5		5		5		5		5		nil
• Timings (5-error cutoff)		20		25		25		25		25		25
- length of timing		1-2 min.		3 min.		3 min.		5 min.		5 min.		5 min.
- S.I. level		1.1-1.2		1.2-1.3		1.2-1.4		1.3-1.5		1.4-1.6		1.5-1.7
- refer to Charts No. 3, 4, 5		3		3		3		4		4		5
Production	15		20		30		35		40		60	
• Untimed		15		20		25		20		20		30
• Timed		0		0		5		15		20		30
- length						3-5 min.		10 min.		10 min.		10 min.
Theory	20		15		10		10		10		5	
Total	100		100		100		100		100		100	

CHART NO. 2

ASSESSING "TOUCH-TYPING"

CRITERIA	Mods 1 – 2 **25 Marks**	Mods 3–5 **20 Marks**	Mods 6–8 **15 Marks**	Mods 9–10 **10 Marks**	Mods 11–14 **5 Marks**
1. Does not use correct fingers; looks to find keys.	0	0	0	0	0
2. Uses correct fingers; looks to find keys.	5	4	3	2	1
3. Uses correct fingers, but looks occasionally at keys; uses function keys improperly.	10	8	6	4	2
4. Uses correct fingers; has mastered function keys, but looks frequently for numbers and symbols.	15	12	9	6	3
5. Uses correct fingers for all keys but looks occasionally for number keys and frequently for special symbols.	20	16	12	8	4
6. Is a touch-typist on alphabetic, numeric and symbol keys; uses function keys properly.	25	20	15	10	5

CHART NO. 3

TYPEWRITING MODULES 1 – 5
ASSESSING SPEED AND ACCURACY

1, 2 and 3 Minute Timings Chart

W.A.M.

GRADING PERIOD				ERRORS AND PERCENTAGE					
1	2	3	4	0	1	2	3	4	5
51	54	57	60	100	97	94	91	88	85
49	52	55	58	98	95	92	89	86	83
47	50	53	56	96	93	90	87	84	81
45	48	51	54	94	91	88	85	82	79
43	46	49	52	92	89	86	83	80	77
41	44	47	50	90	87	84	81	78	75
39	42	45	48	88	85	82	79	76	73
37	40	43	46	86	83	80	77	74	71
35	38	41	44	84	81	78	75	72	69
33	36	39	42	82	79	76	73	70	67
31	34	37	40	80	77	74	71	68	65
29	32	35	38	76	73	70	67	64	61
27	30	33	36	72	69	66	63	60	57
25	28	31	34	68	65	62	59	56	53
23	26	29	32	64	61	58	55	52	49
21	24	27	30	60	57	54	51	48	45
19	22	25	28	56	53	50	47	44	41
17	20	23	26	52	49	46	43	40	37
15	18	21	24	48	45	42	39	36	33
13	16	19	22	44	41	38	35	32	29
11	14	17	20	40	37	34	31	28	25
9	12	15	18	34	31	28	25	22	19
7	10	13	16	26	23	20	17	14	11
5	8	11	14	18	15	12	9	6	3
3	6	9	12	10	7	4	1	0	0
1	4	7	10	2	0	0	0	0	0

CHART NO. 4

TYPEWRITING MODULES 6 – 10
ASSESSING SPEED AND ACCURACY

5 Minute Timings Chart

W.A.M.

GRADING PERIOD				ERRORS AND PERCENTAGE					
1	2	3	4	0	1	2	3	4	5
61	64	67	70	100	97	94	91	88	85
59	62	65	68	98	95	92	89	86	83
57	60	63	66	96	93	90	87	84	81
55	58	61	64	94	91	88	85	82	79
53	56	59	62	92	89	86	83	80	77
51	54	57	60	90	87	84	81	78	75
49	52	55	58	88	85	82	79	76	73
47	50	53	56	86	83	80	77	74	71
45	48	51	54	84	81	78	75	72	69
43	46	49	52	82	79	76	73	70	67
41	44	47	50	80	77	74	71	68	65
39	42	45	48	76	73	70	67	64	61
37	40	43	46	72	69	66	63	60	57
35	38	41	44	68	65	62	59	56	53
33	36	39	42	64	61	58	55	52	49
31	34	37	40	60	57	54	51	48	45
29	32	35	38	56	53	50	47	44	41
27	30	33	36	52	49	46	43	40	37
25	28	31	34	48	45	42	39	36	33
23	26	29	32	44	41	38	35	32	29
21	24	27	30	40	37	34	31	28	25
19	22	25	28	36	33	30	27	24	21
17	20	23	26	32	29	26	23	20	17
15	18	21	24	28	25	22	19	16	13
13	16	19	22	24	21	18	15	12	9
11	14	17	20	20	17	14	11	8	5

CHART NO. 5

TYPEWRITING MODULES 11 – 14
ASSESSING SPEED AND ACCURACY

5 Minute Timings Chart

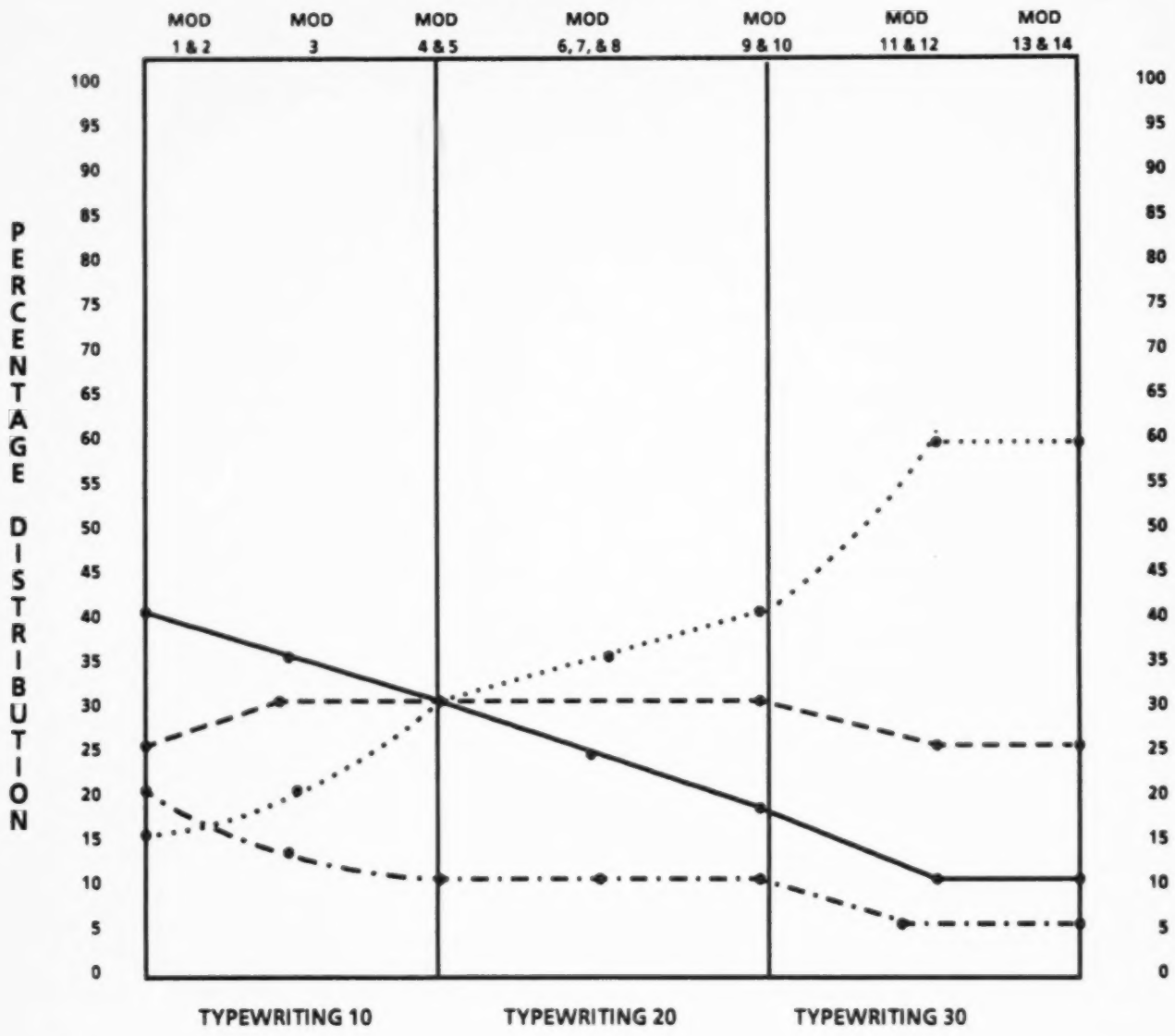
W.A.M.

GRADING PERIOD				ERRORS AND PERCENTAGE					
1	2	3	4	0	1	2	3	4	5
71	74	77	80	100	97	94	91	88	85
69	72	75	78	98	95	92	89	86	83
67	70	73	76	96	93	90	87	84	81
65	68	71	74	94	91	88	85	82	79
63	66	69	72	92	89	86	83	80	77
61	64	67	70	90	87	84	81	78	75
59	62	65	68	88	85	82	79	76	73
57	60	63	66	86	83	80	77	74	71
55	58	61	64	84	81	78	75	72	69
53	56	59	62	82	79	76	73	70	67
51	54	57	60	80	77	74	71	68	65
49	52	55	58	76	73	70	67	64	61
47	50	53	56	72	69	66	63	60	57
45	48	51	54	68	65	62	59	56	53
43	46	49	52	64	61	58	55	52	49
41	44	47	50	60	57	54	51	48	45
39	42	45	48	56	53	50	47	44	41
37	40	43	46	52	49	46	43	40	37
35	38	41	44	48	45	42	39	36	33
33	36	39	42	44	41	38	35	32	29
31	34	37	40	40	37	34	31	28	25
29	32	35	38	34	31	28	25	22	19
27	30	33	36	26	23	20	17	14	11
25	28	31	34	18	15	12	9	6	3
23	26	29	32	10	7	4	1	0	0
21	24	27	30	2	0	0	0	0	0

CHART NO. 6

STUDENT EVALUATION

TYPEWRITING 10–20–30
TRACKING VARIABLES



CODE:

——— TECHNIQUES

– – – – SPEED/ACCURACY

..... PRODUCTION

—·—·— THEORY

CHART NO. 7

PRODUCTION SPEED CHART

	WORDS PER MINUTE ON PRODUCTION TIMING						
%	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
100	30	35	40	45	50	55	60
95	28/29	33/34	38/39	43/44	48/49	53/54	58/59
90	26/27	31/32	36/37	41/42	46/47	51/52	56/57
85	24/25	29/30	34/35	39/40	44/45	49/50	54/55
80	22/23	27/28	32/33	37/38	42/43	47/48	52/53
75	20/21	25/26	30/31	35/36	40/41	45/46	50/51
70	18/19	23/24	28/29	33/34	38/39	43/44	48/49
65	16/17	21/22	26/27	31/32	36/37	41/42	46/47
60	14/15	19/20	24/25	29/30	34/35	39/40	44/45
55	12/13	17/18	22/23	27/28	32/33	37/38	42/43
50	10/11	15/16	20/21	25/26	30/31	35/36	40/41
45	8/9	13/14	18/19	23/24	28/29	33/34	38/39
40	6/7	11/12	16/17	21/22	26/27	31/32	36/37
35	4/5	9/10	14/15	19/20	24/25	29/30	34/35
30	2/3	7/8	12/13	17/18	22/23	27/28	32/33
25		5/6	10/11	15/16	20/21	25/26	30/31
20		3/4	8/9	13/14	18/19	23/24	28/29
15		1/2	6/7	11/12	16/17	21/22	26/27
10			4/5	9/10	14/15	19/20	24/25
5			2/3	7/8	12/13	17/18	22/23

Column Guidelines	Typing 10 (5 credit) Level	Typing 20 (5 credit) Level	Typing 30 (5 credit) Level
Straight copy manuscript or letter	2–3	4–5	5–7
Straight copy letters (with envelopes)	2–3	4–5	5–7
Draft manuscript or letter	2–3	4–5	5–7
Simple tables/forms	1–2	3–4	4–5
Combined reports/tables	1–2	3–4	4–5
Complex tables	1	2–3	3–4

APPENDICES

APPENDIX A

RECOMMENDED DISTRIBUTION OF MARKS
DICTA TYPING 20
WORD PROCESSING 30

Objective	Optional Modules 12 & 13 Dicta Typing 1 & 2		Optional Modules 14 & 15 Word Processing 1 & 2		Optional Module 16 Business Simulation	
	sub-total marks	distribution of marks	sub-total marks	distribution of marks	sub-total marks	distribution of marks
Technique •Posture •Machine Manipulation •Touch–Typing	5	 nil 5 nil	5	 nil 5 nil	nil	 nil nil nil
Speed and Accuracy •Warm–ups •Timings - 5 min. - S.I. level of ± 1.7 - refer to Chart No. 5 - 5-error cutoff	20	 nil 20	20	 nil 20	20	 nil 20
Production • Task Completion Mailable • Timed • Basic Mark/Deductions (see pp#'s. 37–39)	60	 20 20 20	60	 20 20 20	65	 25 20 20
Theory • Hardware • Software • Peripherals • English Skills	15		15		15	
Total	100		100		100	

PROGRESS RECORD FOR TYPEWRITING

CLASS _____ STUDENT _____

Date																	Date
50																	85
49																	84
48																	83
47																	82
46																	81
45																	80
44																	79
43																	78
42																	77
41																	76
40																	75
39																	74
38																	73
37																	72
36																	71
35																	70
34																	69
33																	68
32																	67
31																	66
30																	65
29																	64
28																	63
27																	62
26																	61
25																	60
24																	59
23																	58
22																	57
21																	56
20																	55
19																	54
18																	53
17																	52
16																	51
15																	50
Goal																	Goal
Errors																	Errors
Minutes																	Minutes
Grading																	Grading